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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,884	04/16/2001	Arthur H. Sarkissian		4549
47888	7590	05/10/2006		
HEDMAN & COSTIGAN P.C. 1185 AVENUE OF THE AMERICAS NEW YORK, NY 10036			EXAMINER LAO, LUN YI	
			ART UNIT 2629	PAPER NUMBER

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,884

Applicant(s)

SARKISSIAN, ARTHUR H.

Examiner

Lao Y. Lun

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-88 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on October 12, 2002 have been disapproved because they introduce new matter into the drawings. 37 CFR 1.121(a)(6) states that no amendment may introduce new matter into the disclosure of an application. The original disclosure does not support the showing of 1) the arrangement of alphanumerical keys on Figs.12 and 13; for example, a first surround key does not include key-values of "TAB, SHIFT, and CTRL(see original Fig. 3a) and 2) a protrusion(26) which fits into groove(28).
2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on July 2, 2003 have been disapproved because they introduce new matter into the drawings. 37 CFR 1.121(a)(6) states that no amendment may introduce new matter into the disclosure of an application. The original disclosure does not support the showing of 1) the arrangement of alphanumerical keys on Figs.12 and 13; for example, a first surround key does not include key-values of "TAB, SHIFT, and CTRL(see original Fig. 3a) and 2) a protrusion(26) which fits into groove(28); 2) the actuators(19, 34 and 49) in each surrounding keys showed in figures 3a, 3b, 3c, the original specification only disclose the actuator(3) in the middle key and an actuator(11) in surrounding keys(see figures 1c, 1d and paragraph 47).

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on June 17, 2003 have been disapproved because they introduce new matter into the drawings. 37 CFR 1.121(a)(6) states that no amendment may introduce new matter into the disclosure of an application. The original disclosure does not support the showing of the keyboard configuration showed in figures 10-11 are different from the original figure 3a.

The substitute specification filed on July 2, 2003, July 1, 2003 and June 3, 2003 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: a substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2" has been used to designate both an optional bordering wall and actuating construct; "3" has been used to designated both a key surrounding

and spring; etc.. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Claim Objections

6. The claims 34, 71 and 87(the amendment filed on 7/17/2003) is objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 54-86 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification fails to disclose how a display built in applicant's keyboard to depicting a middle key, a key-surround key and a background as cited in claims 68, 71, 74 and 82. The new specification filed on October 12, 2002 only disclose touch sensing elements are conductive circuit elements within its display screen at each of key(see page 48, lines 6-12). The specification fails to disclose the display is a seven segment display or a matrix display, how to drive this display and how the touch sensing elements within the display screen to sense the touch of a user's finger. The specification fails to disclose the structure of a key with a display and a touch sensing elements. The specification only disclose a mechanical switch(18, 19) for a key to

sensing the touch of a user's finger(see figures 3a, 3b and page 35, lines 6-12 of the new specification filed on October 12, 2002).

The specification fails to disclose how display means can detect touch on the surface of the display cited in claims 69, 72, 75, 78 and 83, or how a touch panel rests above the display to detect the touch as cited in claims 70, 73, 76, 79 and 84. The new specification filed on October 12, 2002 only disclose touch sensing elements are conductive circuit elements within its display screen at each of key(see page 48, lines 6-12) and a mechanical switch(18, 19) for a key to sensing the touch of a user's finger(see figures 3a, 3b and page 35, lines 6-12 of the new specification filed on October 12, 2002). However, the specification fails to teach how the touch sensing elements mounted on the display to sense the touch on the surface of the display.

The specification fails to disclose a first nesting module having a first key surround key having the key values of "SHIFT" and "TAB"; a second surround key having the key values of "~", "'", "@", and "ALT"; a third surround key having the key values of "ESC" and "F1"; a second nesting module having a second key surround key having the key values of "#", and "3"; a third surround key having the key values of "F2"; a third nesting module having a second surround key having the key values of "\$", and "4"; a third surround key having the key values of "F3"; a fourth nesting module having a second surround key having the key values of "^", and "6"; a third surround key having the key values of "F4", and "F5"; a fifth nesting module having third surround key having the key values of "F6" and "F7"; a sixth nesting module having a third surround key having the key values of "F8"; a seventh nesting module having a third surround

key having the key values of "F9"; a eighth nesting module having first key surround key having the key values of "}", "{" and "|"; a second surround key having the key values of "-", "_", and "BACKSPACE", and "ALT"; a third surround key having the key values of "F10", "F11" and "F12"; and a ninth nesting module having a first key surround key having the key values of "Home", "PgUp"; "PgDn" and "End"; second key surround key having the key values of "Up", "DOWN"; "LEFT" and "RIGHT" as cited in claims 54 and 77 on the original specification(see original figure 3a).

The specification fails to disclose a first nesting module having a first key surround key having the key values of "SHIFT" and "TAB"; a second surround key having the key values of "~", "^", "6" and """; a third surround key having the key values of "ESC", "F1", "F2", "F3", "F4" and "F5"; a second nesting module having a first surround key having the key values of "P", "{", "}", and "|"; a second surround key having the key values of "-", "_", and "ctrl"; a third surround key having the key values of "F6", "F7", "F8", "F9", "F10", "F11", "F12" and a third nesting module having a first key surround key having the key values of "Home", "PgUp"; "PgDn" and "End"; second key surround key having the key values of "Up", "DOWN"; "LEFT" and "RIGHT" as cited in claims 62 and 82 on the original specification(see original figure 3a).

9. The amendment filed on October 15, 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "washer 25 is

attached to the bottom of the key-surround module having a protrusion 26 which fits into groove 28 of base 27.

Applicant is required to cancel the new matter in the reply to this Office Action.

10. Claims 62-67 and 82-86 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

The recitations of "a first nesting module, a second nesting module and a third nesting module" in claims 62 and 82 have conflicts with "a first, second and third nesting module" in claims 65, 85 and 86 since a first nesting module cited in claims 62 and 82 should be a first groups which including a first, second, third and fourth nesting module cited in claims 85 and 86.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 20-53, 87 and 88 are rejected under 35 U.S.C. 102(e) as being anticipated by Nuovo et al(6,593,914).

As to claims 20-53, 87 and 88, Nuovo et al teach a key-surround module input device comprising a middle key(72) having an input means for inputting data to the computer wherein the middle key is not a mouse button and a key-surround key(0-9) surrounding a middle key(72) is a stationary, washer-shape, circular data entry key(see figures 2-5; column2, lines 63-68; column 3, lines 1-7 and column 5, lines 1-21). Nuovo et al teach the key-surround key(0-9) is pivotable in a plurality of positions and actuation one of the plurality of actuating contact points(84) outputs a data to a computer(see figures 2-3; column 2, lines 51-68; column 3, lines 1-20; column 4, lines 41-68 and column 5, lines 1-20).

As to claims 24, 34 and 42, Nuovo et al teach a base means(82) having a track(see figures 2-3 and column 4, lines 41-58).

As to claims 27 and 46, Nuovo et al teach the middle key(72) is a cursor navigating device(see figures 2-5 and column 2, lines 51-62).

As to claims 30, 34 and 37, Nuovo et al teach a first surround key(0); a second surround key(1); a third surround key(3) and support means(see figures 2-5; column2, lines 63-68; column 3, lines 1-7 and column 4, lines 41-58).

13. Claims 20-26, 28-45, 47-53, 68-76, 87 and 88 are rejected under 35 U.S.C. 102(e) as being anticipated by Habu(US-20020093488).

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As to claims 20-26, 28-45, 47-53, 68-76, 87 and 88, Habu teaches a key-surround module input device comprising a touch sensitive display; a middle key(18) having an input means for inputting data to the computer wherein the middle key is not a mouse button and a key-surround key(0-9, #, *) surrounding a middle key(18) is a stationary, washer-shape, circular data entry key(see figures 1-8 and paragraphs 6, 14, 31-33 and 35-42). Habu teaches the key-surround key(0-9, #, *) is pivotable in a plurality of positions and actuation one of the plurality of actuating contact points(36, 38) outputs a data to a computer(see figures 2-3 and paragraphs 31-36).

As to claims 24, 34 and 42, Habu teaches a base means having a track(see figure 3).

As to claims 30, 34 and 37, Nuovo et al teach a first surround key(0); a second surround key(1); a third surround key(3) and support means(see figure 2).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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15. Claims 68-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nuovo et al in view of Dreher(4,551,717) and Shimauchi(4,812,833).

Nuovo et al fail to disclose a display on a key and a touch sensor above the display.

Dreher teaches an input device comprising an LCD display mounted on a key(see figures 1-3 and column 2, lines 48-68). It would have been obvious to have modified Nuovo et al with the teaching of Dreher, so the value or indication of a key could be easy to change or reprogramming.

Shimauchi teaches a touch sensor above a display(16)(see figures 1-3 and column 2, lines 25-48). It would have been obvious to have modified Nuovo et al as modified with the teaching of Shimauchi, so a mechanical switch on a key could be replaced by an electronic switch and to reduce the possibility or erroneous input operation when the effective area of key is smaller(see Shimauchi's column 1, lines 34-39).

16. Claims 68-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nuovo et al in view of Habu(US-20020093488)

Nuovo et al fail to disclose a display on a key and a touch sensitive display.

Habu teaches an input device comprising a touch sensitive display(see figures 1-8 and paragraphs 6, 14, 36, 38 and 41). It would have been obvious to have modified Nuovo et al with the teaching of Habu, so the value or indication of a key could be easy to change or reprogramming.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen(6,717,571) teaches a middle key(11) and a surrounding key(cursor key).

Wood et al(6,810,271) teach a middle key(24) and a surrounding key(16).

Schein et al(6,075,575) teach a middle key(24) and a surrounding key(34, 32, 20).

Chou(6,179,496) teaches a middle key(2) and a surrounding key(32).

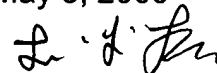
Robbin et al(us-20030095096) teach a middle key and surrounding keys.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 8, 2006



Lun-yi Lao
Primary Examiner